

## DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

### RCRA Corrective Action

#### Environmental Indicator (EI) RCRIS code (CA750)

#### Migration of Contaminated Groundwater Under Control

Facility Name: Mystic Station  
Facility Address: 173 Alford Street, Boston, MA  
Facility EPA ID #: MAD000842401

1. Has all available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

  X   If yes - check here and continue with #2 below.

       If no - re-evaluate existing data, or

       if data are not available, skip to #8 and enter "IN" (more information needed) status code.

### BACKGROUND

#### Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

#### Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

#### Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

#### Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

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2. Is groundwater known or reasonably suspected to be "contaminated"<sup>1</sup> above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

  X   If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

       If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

       If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):   See attached narrative  

**Footnotes:**

<sup>1</sup>"Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

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X If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"<sup>2</sup>).

\_\_\_\_\_ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the “existing area of groundwater contamination”<sup>2</sup>) - skip to #8 and enter “NO” status code, after providing an explanation.

If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s): See attached narrative

<sup>2</sup> “existing area of contaminated groundwater” is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of “contamination” that can and will be sampled/tested in the future to physically verify that all “contaminated” groundwater remains within this area, and that the further migration of “contaminated” groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.



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\_\_\_\_\_ If yes - continue after identifying potentially affected surface water bodies.

\_\_\_\_\_ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s): See attached narrative

It and enter "NO" status code after providing explanation

If unknown - skip to #8 and enter "IX" status code

Religion and Nationality (200-2000)

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5. Is the **discharge** of “contaminated” groundwater into surface water likely to be “**insignificant**” (i.e., the maximum concentration<sup>3</sup> of each contaminant discharging into surface water is less than 10 times their appropriate groundwater “level,” and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

\_\_\_\_\_ If yes - skip to #7 (and enter “YE” status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration<sup>3</sup> of key contaminants discharged above their groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

\_\_\_\_\_ If no - (the discharge of “contaminated” groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration<sup>3</sup> of each contaminant discharged above its groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations<sup>3</sup> greater than 100 times their appropriate groundwater “levels,” the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

\_\_\_\_\_ If unknown - enter “IN” status code in #8.

Rationale and Reference(s): \_\_\_\_\_  
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<sup>3</sup> As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

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6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be "**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented<sup>4</sup>)?

\_\_\_\_\_ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR  
2) providing or referencing an interim-assessment,<sup>5</sup> appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

\_\_\_\_\_ If no - (the discharge of "contaminated" groundwater can not be shown to be "**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

\_\_\_\_\_ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s): \_\_\_\_\_

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<sup>4</sup> Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

<sup>5</sup> The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.



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    X     If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

\_\_\_\_\_ If unknown - enter "IN" status code in #8.

Rationale and Reference(s): See attached narrative

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8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

☒ YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the Mystic Station facility, EPA ID # MAD000842401, located at 173 Alford Street, Boston, Massachusetts. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

☐ NO - Unacceptable migration of contaminated groundwater is observed or expected.

☐ IN - More information is needed to make a determination.

Completed by

(signature)

(print) David E. Grove

(title) Senior Project Manager

Date

9/26/13

Supervisor

(signature)

(print)

(title)

(EPA Region or State)

Date

9/26/2013

11/27/13

Dan Weinberg, Acting Section Chief  
EPA RCRA CA

Locations where References may be found:

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**RCRA Corrective Action  
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Migration of Contaminated Groundwater Under Control**

The following narrative expands on the conclusions reached in each step of the Environmental Indicator Determination for RCRIS Code CA750 – Migration of Contaminated Groundwater Under Control. Headings used for these notes correspond to the item numbers in the determination worksheet. In this evaluation, Massachusetts Contingency Plan (MCP, 310 CMR 40.0000) standards were used to evaluate the risk (if any) that identified contaminants pose to human receptors.

**BACKGROUND**

In 2009, Mabbett & Associated, Inc. (M&A) prepared a RCRA Facility Assessment Report for the Mystic Station (Site) at 173 Alford Street, Boston, Massachusetts. The Facility Assessment Report included a comprehensive review of historic releases of oil and/or hazardous materials (OHM) identified at the facility. The M&A report listed one Solid Waste Management Unit (SWMU) and seven Areas of Concern (AOCs) where additional RCRA Facility Investigations (RFI) were recommended. GZA and Boston Generating subsequently refuted the inclusion of the SWMU and two of the AOCs, and suggested potential response actions for the remaining AOCs situated on property under direct control by Boston Generating. It should be noted that one of the open AOCs (AOC 19 – Release Tracking Number (RTN) 3-20199, Electrical Substation) is situated on property independently operated and controlled by NSTAR Electric & Gas Company. GZA understands that NSTAR has provided information related to this AOC which has resulted in a finding of No Further Action required.

The table below documents the SWMUs and AOCs, and provides a description of the nature of the release and response actions conducted to date. This table was included to provide a brief summary of the various SWMUs and AOCs. Please refer to M&A's Report for a more comprehensive description of the nature and extent of noted contamination. Justification for decisions made on the Environmental Indicator Determination for RCRIS Code CA750 immediately follow the table.

<b>SWMU/ AOC Number</b>	<b>SWMU/AOC Name</b>	<b>Waste Managed</b>	<b>Discussion</b>
SWMU 1	Oil Separator Pit/Former 1,000-gallon Waste Oil Underground Storage Tank (UST)	Waste Oil	This SWMU includes the area of a former fuel oil UST and oil/water separator where petroleum impacted soils were previously observed. The area was excavated as part of the development of Mystic 8&9 (see AOC 7) and is the subject of an MCP Class A-3 Response Action Outcome (RAO) Statement was filed on August 10, 2005. The Class A-3 RAO indicates that a Condition of No Significant Risk exists at the Site under current and future conditions based on the implementation of an Activity and Use Limitation (AUL) serving as an institutional control limiting exposures to any residual subsurface contamination. M&A recommended No Further Action.



SWMU/ AOC Number	SWMU/AOC Name	Waste Managed	Discussion
SWMU 2	RTN 3-10431 (Waste Treatment Plant Storage Tank Farm)	Corrosive Wastewater	In 1994, approximately 931,362 gallons of wastewater were released from the waste treatment plant storage tank farm. The ground surface was frozen at the time, limiting the potential for the release to impact soils or infiltrate the subsurface; however, approximately 361,802 gallons are believed to have flowed into the Mystic River. Based on remedial actions, a Class A-1 RAO was issued on March 14, 1994, indicating that a Condition of No Significant Risk had been achieved, and that contaminants at the Site had been reduced to background. M&A recommended No Further Action.
SWMU 3	Former Wastewater Surface Impoundment	Corrosive Wastewater	SWMU 3 refers to a former wastewater surface impoundment. Testing in 1985 revealed the presence of a leak at the toe seam of the liner. Closure activities were conducted, resulting in MassDEP issuing a clean closure letter. M&A recommended No Further Action.
SWMU 4	Former and Current Wastewater Treatment System	Corrosive Wastewater, Hazardous Chemicals	SWMU 4 includes the remaining portions of the waste water treatment system. M&A recommended No Further Action as there were no documented releases from the system, other than those discussed above.
SWMU 5	Coal Ash Pile	Coal Ash	SWMU 5 concerns the potential, historic on-Site disposal of coal ash. M&A recommended additional assessment; however, discussions between USEPA and Boston Generating resulted in a finding of No Further Action. Historic on-Site coal ash disposal would likely have occurred in the area now occupied by Mystic 8&9. The area was excavated as part of the development of Mystic 8&9 (see AOC 7). The Class A-3 RAO indicates that a Condition of No Significant Risk exists at the Site under current and future conditions based on the implementation of an AUL serving as an institutional control limiting exposures to any residual subsurface contamination.
SWMU 6	Fly Ash Basin	Fly Ash	This SWMU applies to a former fly ash storage basin. No evidence of a release was noted. M&A recommended No Further Action.
AOC 1	Unit 7 Transformer Area	Petroleum Hydrocarbo ns	This AOC concerns the detection of petroleum hydrocarbons in sediments within a sump associated with non-PCB transformers near the Unit 7 Main and Station Service Transformers. The impacted sediment was subsequently removed. M&A recommended no further action.
AOC 2	Unit 4 Building, Stained Areas	Petroleum Hydrocarbo ns	This AOC concerns reports of a "greenish liquid" near the eastern exterior of the Unit 4 fuel oil heater room. Although M&A recommended additional assessment, discussions between USEPA and Boston Generating resulted in a finding of No Further Action. Although the exact nature of the liquid cannot be documented, it is likely that the observer was describing fly ash mixed with water (which would result in the noted conditions and green color). General housekeeping practices in place at the time would have required the immediate cleanup of the condition described, and the material would have been incorporated into the facility's existing waste stream.



SWMU/ AOC Number	SWMU/AOC Name	Waste Managed	Discussion
AOC 3	Abandoned Sump Outside Unit 3	Acids	This AOC concerns the potential for a release of acid to surficial soils from an abandoned sump for a former acid tank. Soil screening conducted as part of GZA's recent subsurface investigation program did not indicate the presence of acidic soils in this area.
AOC 4	RTN 3-12422	No. 6 Fuel Oil	Multiple documented releases of No. 6 fuel oil to soil have occurred from a pipeline that transfers fuel oil between Exxon and the facility. Response actions have resulted in a Condition of No Significant Risk under the MCP, and a Class A-2 RAO was filed on August 28, 1995. M&A recommended No Further Action.
AOC 5	Abandoned USTs	No. 2 and No. 6 Fuel Oil	A series of former fuel oil UST were located along the southern property. Closure documentation for these USTs is not available. Analysis of soils and groundwater conducted as part of GZA's recent subsurface investigation program did not indicate the presence of petroleum hydrocarbons above MCP regulatory limits.
AOC 6	Spill of Unknown Location	Fuel Oil	AOC 6 concerns the 1976 release of approximately 9,000 gallons of fuel oil. Although a specific location for this release was not noted, prior reports indicated that the release "likely occurred near oil storage tanks, pipelines, valves, and/or other fuel handling equipment." Although M&A recommended additional assessment, discussions between USEPA and Boston Generating resulted in a finding of No Further Action. Based on the historic operations at the Site, and a review of previous such releases, the most likely locations for a release of this magnitude would be from the underground and above ground pipelines, bulk fuel storage tanks, the storm drain system or fire suppression system all formerly location in the eastern portion of the Site in the area now occupied by Mystic 8&9 Station. The area was excavated as part of the development of Mystic 8&9 (see AOC 7). The Class A-3 RAO indicates that a Condition of No Significant Risk exists at the Site under current and future conditions based on the implementation of an Activity and Use Limitation serving as an institutional control limiting exposures to any residual subsurface contamination.
AOC 7	RTN 3-0923, RTN 3-18553, RTN 3-18717	No. 6 Fuel Oil, Phthalate	AOC 7 refers to a series of historic release which occurred in the area of the current Mystic 8&9 facility. Extensive investigation and remediation were performed in conjunction with these releases, but complete closure could not be achieved due to the presence of buildings and equipment in active use; however, during the development of Mystic 8&9, residual contaminated soil and groundwater were removed from the area and treated or disposed of off-Site. The area was excavated as part of the development of Mystic 8&9. A Class A-3 RAO was filed on August 10, 2005. The Class A-3 RAO indicates that a Condition of No Significant Risk exists at the Site under current and future conditions based on the implementation of an AUL serving as an institutional control limiting exposures to any residual subsurface contamination. M&A recommended No Further Action.



SWMU/ AOC Number	SWMU/AOC Name	Waste Managed	Discussion
AOC 8	RTN 3-12140, RTN 3-17789	No. 6 Fuel Oil	AOC 8 refers to residual NAPL present near Tank 1 and 2, associated with historic releases of No. 6 fuel oil. Structural elements of the facility preclude the excavation of the residual fuel oil; however, a Class C RAO, a Temporary Solution under the MCP indicating that a condition of No Substantial Hazards exist at the Site, was submitted on August 8, 2000. Post Class C RAO monitoring has revealed declining NAPL thicknesses, and recent groundwater sampling has not indicated the presence of petroleum hydrocarbons above MCP regulatory thresholds. M&A recommended No Further Action.
AOC 9	Former Fly Ash Storage Basin Pump Room	Ethylene Glycol	This AOC refers to a release of ethylene glycol which was fully contained within the pump room of a fly ash storage basin. M&A recommended No Further Action.
AOC 10	RTN 3-19849	No. 6 Fuel Oil	This AOC concerns the release of No. 6 fuel oil to a utility trench located in the floor of the Unit 4 building, and subsequently to the Mystic River. Response actions contained the release and remediated impacted receptors. M&A recommended No Further Action as a Class A-1 RAO was filed on July 14, 2001.
AOC 11	RTN 3-22499	No. 2 Fuel Oil	This AOC concerns the release of approximately 187 gallons of No. 2 fuel oil to pavement. The release was remediated, and a Class A-1 RAO was filed on March 21, 2003. M&A recommended No Further Action.
AOC 12	RTN 3-17387	No. 2 Fuel Oil	This AOC concerns the release of approximately 25 gallons of No. 2 fuel oil to the bermed area of Tanks 1 and 2. The release was remediated, and a Class A-1 RAO was filed on December 7, 1998. M&A recommended No Further Action.
AOC 13	Tetrachloroeth ylene in Groundwater	Tetrachloroe thylene	AOC 13 refers to the detection of tetrachloroethylene in groundwater during closure activities associated with the former surface impoundments (See SWMU 3) in the early 1990s. Concentrations detected are below the current, applicable MCP regulatory thresholds. M&A recommended additional assessment for this AOC. GZA has recently installed a groundwater monitoring well in this area to assess for the presence of PCE; groundwater analytical results did not indicate concentrations of volatile organic compounds (VOCs) above laboratory detection limits.
AOC 14	Former Transformers 1, 2, 3, 4, 5, 6 and 11	PCBs	AOC 14 concerns the potential for PCB impacts resulting from historic operation of PCB-containing transformers. M&A recommended assessment of all 7 transformers; however, transformers 4 and 11 are currently active. The former locations of transformers 1 and 2 are covered with permanent storage trailers and pavement. Soil sampling was conducted in former locations of the remaining transformers. Preliminary results indicate the presence of PCBs in shallow soils above MCP regulatory thresholds at Transformers 3 and 6. Soils around Transformer 5 were less than the Reportable Concentrations under MCP. An MCP Phase I Initial Site Investigation (ISI) Report pursuant to 310 CMR 40.0480 and Tier II Classification pursuant to 310 CMR 40.0500 was submitted to MassDEP on December 7, 2011.



SWMU/ AOC Number	SWMU/AOC Name	Waste Managed	Discussion
AOC 15	RTN 3-13744	Hydraulic Oil	In 1996, approximately 19 gallons of hydraulic oil were released, resulting in a sheen on the Mystic River. Response actions were conducted, and a Class A-1 RAO was issued on July 10, 1996. M&A recommended No Further Action.
AOC 16	RTN 3-17445	93.7% Sulfuric Acid	In 1998, approximately 10 gallons of sulfuric acid was released from a failed valve. Response actions were conducted, and a Class A-2 RAO was issued on December 16, 1998. M&A recommended No Further Action.
AOC 17	RTN 3-22934	No-PCB MODF	In 2003, a release of approximately 30 gallons of non-PCB transformer oil occurred. Response actions were conducted, and a Class A-2 RAO was issued on June 23, 2003. M&A recommended No Further Action.
AOC 18	RTN 3-22863	No-PCB MODF	AOC 18 concerns the release of approximately 100 gallons of MODF within the 115 kilovolt outdoor electrical substation operated by NStar. The release was remediated and a Class A-2 RAO issued May 28, 2003. M&A recommended No Further Action.
AOC 19	RTN 3-20199	PCB and MODF	AOC 19 concerns the potential for a historic release of PCBs within the 115 kilovolt outdoor electrical substation operated by NStar. M&A initially recommended further assessment; however, NStar personnel provided USEPA with supplemental information documenting appropriate handling of former PCB apparatus, resulting in a finding of No Further Action required.

## 2. Groundwater Contamination Determination

As described above, identified groundwater contamination at the Site above MCP regulatory thresholds is limited to the presence of No. 6 oil NAPL associated with AOC 8. A Class C Response Action Outcome (RAO), which is a Temporary Solution as defined by the MCP, is appropriate because it is infeasible to remove the viscous No. 6 fuel oil without excavation in the area of the aboveground tanks. The aboveground tanks must remain in service to support the operation of Mystic Unit 7. Although AOC 8 is being adequately addressed under the MCP, based on the observed NAPL, GZA has conservatively assumed that groundwater in this area will be considered "contaminated" for the purposes of this checklist. Response Actions designed to achieve a Permanent Solution under the MCP (a regulatory endpoint synonymous with a final remedy) will be undertaken when the tanks are no longer in service. Response Actions are described in further detail in Item No. 5 below. In addition, proposed regulatory changes to the MCP regarding NAPL stability may allow more expedited closure of the Site. The proposed regulatory changes are undergoing public comment, and will be reevaluated when finalized.

Soil in locations of former transformers (AOC 14) are being investigated under the MCP. On July 14, 2010, a series of borings in these areas were advanced using a vacuum excavator. The goal of these explorations was to collect soil samples from a depth of below 6 feet, to assess for residual PCB contamination; however, multiple boring attempts met with refusal, and no boring locations could be cleared for the Transformer 1 and 2 area. PCBs in shallow soil above MCP regulatory thresholds were found in locations of former transformers 3 and 6, but it does not



appear that groundwater is affected. Further investigation will be completed as part of a Phase II Comprehensive Site Assessment (CSA) which is due to be completed by December 7, 2013.

### **3. Determination of Stabilization of Groundwater Migration**

The identified contamination consists of a layer of NAPL (No. 6 fuel oil). Due to the viscosity of No 6 fuel oil, coupled with the ongoing response actions under the MCP, migration of the NAPL plume is not expected. Additionally, recent groundwater testing from the affected area has indicated that no volatile petroleum hydrocarbons (VPH) or extractable petroleum hydrocarbons (EPH) were detected above laboratory method detection limits. Documentation of the testing is included as part of GZA's September 2010 Periodic Evaluation of the Status of the Temporary Solution and subsequent Semi-annual monitoring reports.

### **4. Determination of Discharge to Surface Water**

Recent groundwater testing from the affected area of AOC 8 indicates that no VPH or EPH compounds were detected above laboratory method detection limits. As no dissolved phase plume is present, discharge to surface water is not expected. Documentation of the testing is included as part of GZA's September 2010 Periodic Evaluation of the Status of the Temporary Solution.

Groundwater has not been tested in the area of AOC 14; however, it appears that PCB is limited to shallow soil.

### **5. Ongoing Groundwater Monitoring**

Long-term groundwater monitoring has, and will continue to be, conducted under the MCP, and documented in semiannual Post-RAO C Operation, Maintenance and Monitoring Reports. As required by the MCP, a Periodic Review of the Temporary Solution is required every five years. The most recent Periodic Review in 2010 indicated that the appropriate Site-specific monitoring program includes the following activities: gauging/recovery of NAPL on a quarterly basis; collection of groundwater samples for analysis for VPH and EPH once per 5-year review period; and evaluation of the potential changes in Site conditions over time.

Recent monitoring results demonstrate that the Site conditions remain consistent with conditions described in the Class C RAO; NAPL was only detected in one monitoring well (ABB-MW-203), and NAPL thickness in ABB-MW-203 was below ½ inch during the past two quarterly monitoring events. Based on the absence of NAPL in downgradient wells GZ-301 and ABB-MW-204, LNAPL does not appear to be migrating from the source area. However, since LNAPL thickness is intermittently detected above the MCP ½-inch UCL in ABB-MW-203 a Permanent Solution cannot be achieved at this time. The periodic gauging and recovery events will continue to monitor NAPL thickness and will evaluate options for achieving a Permanent Solution RAO during the current periodic review period (2010-2015).